

# Recombinant human Guanylate kinase 1/GUK1 protein

Catalog Number: ATGP0690

## PRODUCT INFORMATION

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### Expression system

E.coli

### Domain

1-197aa

### UniProt No.

Q16774

### NCBI Accession No.

NP\_000849

### Alternative Names

Guanylate kinase, GMK, GMP kinase, GMPK

## PRODUCT SPECIFICATION

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### Molecular Weight

23.9 kDa (217aa) confirmed by MALDI-TOF

### Concentration

1mg/ml (determined by Bradford assay)

### Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 10% glycerol, 1mM DTT, 0.1M NaCl.

### Purity

> 90% by SDS-PAGE

### Tag

His-Tag

### Application

SDS-PAGE

### Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

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### Description

GuK1, also known as GMK, belongs to the guanylate kinase family. This protein exists as a monomer that catalyzes the ATP-dependent conversion of GMP to GDP, thereby playing an essential role in the recycling of GMP. Via its catalytic activity, GuK1 is thought to participate in regulating the supply of guanine nucleotides to signal transduction pathways. Overexpression of GuK1 is associated with pituitary adenocarcinomas, suggesting that GuK1 is involved in tumorigenesis. Recombinant human GuK1 protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography techniques.

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## Amino acid Sequence

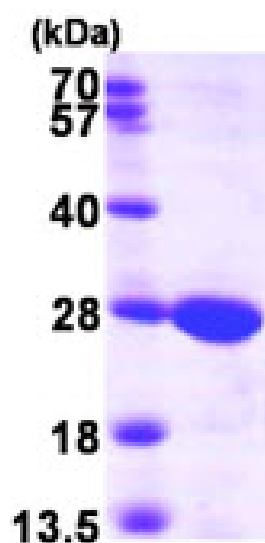
MGSSHHHHHHH SSGLVPRGSH MSGPRPVVLS GPSGAGKSTL LKRLLEHSG IFGFSVSHTT RNPRPGEENG KDYYFVTREV  
MQRDIAAGDF IEHAEFSGNL YGTSKVAVQA VQAMNRCVL DVDLQGVNRI KATDLRPIYI SVQPPSLHVL EQRLRQRNTE  
TEESLVKRLA AAQADMESK EPGLFDVII NDSLQAYAE LKEALSEEIK KAQRTGA

## General References

Da Rocha AA., et al. (2006) Pituitary. 9(2):83-92.  
Brady WA., et al. (1996) J Biol Chem. 271(28):16734-40.

## DATA

### SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.

15% SDS-PAGE (3ug)